NATIONAL PARTNERSHIP FOR IMMUNIZATION
PROMOTING IMMUNIZATION ACROSS THE LIFESPAN

NATIONAL PARTNERSHIP FOR IMMUNIZATION
CHICKENPOX REPORT CARD - KEY FINDINGS

Overview

Chickenpox is highly contagious, easily spread, and sometimes can have serious complications – such as severe skin infections, pneumonia and encephalitis (swelling of the brain) that may result in hospitalization, or in rare cases, death. Prior to the introduction of the varicella vaccine in 1995, an estimated four million people[1] were infected with the chickenpox virus each year, with 11,000 requiring hospitalization.[2]

After its licensure, the Advisory Committee on Immunization Practices (ACIP) and the Centers for Disease Control and Prevention (CDC) added the varicella vaccine to the list of recommended childhood vaccinations in 1996.[3] In 1999, CDC and ACIP recommended that states require chickenpox vaccinations of all school-age children.[4]

To mark the 10th anniversary of the vaccine, the National Partnership for Immunization (NPI) is releasing topline findings from its *Chickenpox Report Card*, highlighting both the progress made by each state in helping to protect children from chickenpox and some challenges still faced in reaching the *Healthy People 2010* objectives set by the U.S. Department of Health and Human Services and the U.S. chickenpox vaccination program in the United States, which is aimed at reducing the morbidity and mortality of the disease.

National Data

- Close to 85 percent of children 19 to 35 months of age received the varicella vaccine in 2003, according to the CDC's National Immunization Survey.[5]
- However, that same year, an estimated 600,000 (15.2 percent) children 19-35 months of age remained unvaccinated against chickenpox.[6,7]
- Potentially at risk for chickenpox and its complications are unvaccinated children who have not had chickenpox.[8] Those potentially at risk may include children who have:
  - Already received their other primary vaccinations before varicella vaccination was recommended by the ACIP in 1996.[9]
  - Entered school prior to the implementation of school or daycare immunization requirements.[10]
  - Have not had an opportunity to receive the vaccine.[11]
- The risk of complications from chickenpox is 10-20 times higher in adolescents and adults than for younger children.[12]
- More progress is needed to reach the *Healthy People 2010* goal of vaccinating greater than or equal to 90 percent of children ages 19 to 35 months old[13] and adolescents ages 13-15 years old.[14] National immunization coverage rates for children ages 19 to 35 months increased from 1996 through 2003*:

Year	1996[15]	1997[16]	1998[17]	1999[18]	2000[19]	2001[20]	2002[21]	2003[22]
National Coverage Rate	12.2	25.8	43.2	57.5	67.8	76.3	80.6	84.8

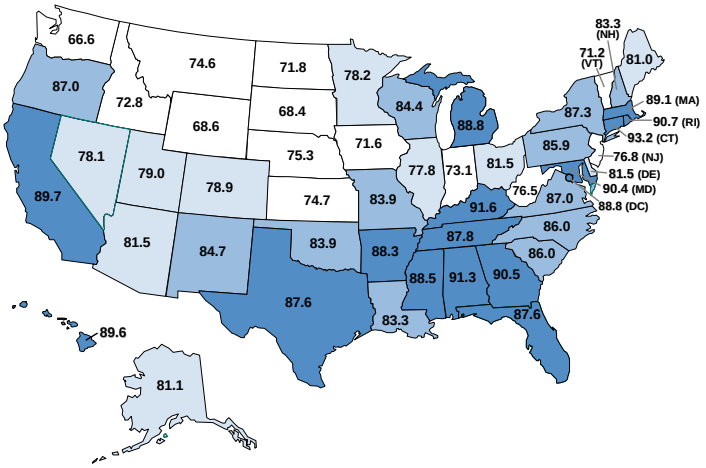
* Note: The CDC posted NIS data for Q3/2003-Q2/2004 on its web site in February 2005. The national rate of chickenpox vaccination coverage rate increased to 86.2 +- 0.7 percent. To see these data, including state-by-state data, go to http://www.cdc.gov/nip/coverage/nis/03-04/tab25_var_race_iap_0304.xls.

Prescribing information for the chickenpox vaccine, Varivax® [Varicella Virus Vaccine Live (Oka/Merck)] is attached.

State by State Data

- Vaccination rates vary from state to state, from approximately 67 percent to more than 93 percent in 2003.[23]
- Leading authorities – the Advisory Committee on Immunization Practices (ACIP), American Academy of Pediatrics (AAP) and American Academy of Family Physicians (AAFP) – recommend chickenpox vaccine for routine vaccination of all appropriate at-risk children 12 months of age or older.
- Chickenpox vaccination is required in most states.
  - More than 90 percent of the babies born each year in the United States live in states with school or daycare state vaccination requirements.[24]
  - State requirements are usually targeted at specific groups (e.g., children entering daycare, kindergarten, first grade and middle school).

State Snapshot of Chickenpox Coverage (coverage rates based on full year 2003 data from the National Immunization Survey)[25]

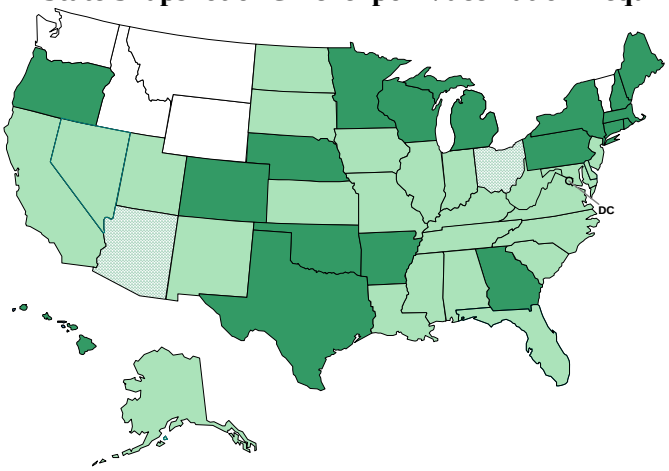


Legend*

- States with coverage of 87.4% or more
- States with coverage within ± 2.5 percentage points of the 2003 national coverage rate of 84.8%
- States with coverage between 77.2% and 82.2%
- States with coverage equal to or less than 77.1%

*****NPI employed a common analytical tool known as "class intervals" to construct this break-out of states. An initial class interval of 82.3 percent to 87.3 percent was assigned to the set of states having vaccination coverage rates that were plus or minus 2.5 percentage points from the 2003 national rate of 84.8 percent. Two additional class intervals of five percentage points each were established – one above and one below – that initial class. A fourth interval was assigned to states falling 5.2 percentage points or more below the lowest value of the initial class. NPI used this same approach in its 2002 Chickenpox Report Card.[26]

State Snapshot of Chickenpox Vaccination Requirements[27, 28, 29, 30]



Legend*

- Varicella vaccination required for daycare and/or school entry as of September 2004
- Varicella vaccination required for middle-school entry as well as daycare and/or school entry
- No requirements
- Passed legislation to go into effect in 2005 - 2006

The chickenpox vaccine is indicated for vaccination against varicella in individuals 12 months of age and older. It is contraindicated in individuals with a history of hypersensitivity or an anaphylactoid reaction to any component of the vaccine, including gelatin or neomycin, or in individuals with any immunodeficient condition or receiving immunosuppressive therapy. For details about the indications, contraindications, warnings, precautions, adverse reactions and dosage and administration for Varivax®, please read the attached prescribing information.

Reducing Disease Severity

- Reduction in varicella disease in 2001 ranged from 67 percent to 82 percent in four states with adequate reporting levels (Illinois, Michigan, Texas and West Virginia – states that monitored chickenpox prior to and after the introduction of the vaccine), compared with the average incidence rate of varicella in those states for 1990-1994.[31]
- CDC population-based chickenpox disease data from three surveillance communities indicate that chickenpox cases declined significantly – between 71 and 84 percent – as vaccination coverage rose.
- Reductions in these three communities from 1995-2000 were:
  - Antelope Valley, CA: 71 percent reduction
  - Travis County, TX: 84 percent reduction
  - West Philadelphia, PA: 79 percent reduction
    - In all three communities, there was a marked decline in reported chickenpox cases in all age groups, indicating reduced virus transmission.[32]
- The vaccine has been shown to be 97 to 100 percent effective against moderate to severe chickenpox and 85 percent effective against all forms of chickenpox.[33,34,35]

Observations made within the past decade:

- A decline of nearly 75 percent in chickenpox-related hospital discharges was observed between 1995 and 2001[36], and
- In 2002, there were nine chickenpox-related deaths reported, compared to an estimated 100 annual deaths before 1995.[37,38]

There are insufficient data to assess the rate of protection of the chickenpox vaccine against the serious complications of chickenpox (e.g. encephalitis, hepatitis, pneumonia) and during pregnancy (congenital varicella syndrome).

Vaccination with the chickenpox vaccine may not result in protection of all healthy susceptible children, adolescents and adults. The duration of protection against chickenpox obtained using the chickenpox vaccine Varivax in the absence of wild-type boosting is unknown.

In children, adolescents and adults monitored for up to 42 days post vaccination, the adverse effects most frequently reported were as follows: fever, injection-site complaints; varicella-like rash (injection site) and varicella-like rash (generalized); for a list of adverse reactions, please read the attached Prescribing Information.

About the National Partnership for Immunization

The National Partnership for Immunization (NPI) is a non-profit organization created in 2000 to encourage greater awareness, acceptance and use of immunization by people of all ages through partnerships with public and private organizations. NPI brings together private and public sector partners, including health care professional organizations; community-based organizations; policymakers; vaccine manufacturers; insurance companies; managed care corporations; hospitals; major employers; health care and social service professionals; medical and scientific researchers; federal, state and local health agencies and public health advocates to enhance public and professional education in order to reduce the incidence of vaccine-preventable diseases among children, adolescents and adults.

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